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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,411	01/30/2002	Koichiro Kawaguchi	01272.020504	4733

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EXAMINER

COLILLA, DANIEL JAMES

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/058,411

Applicant(s)

KAWAGUCHI ET AL.

Examiner

Dan Colilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The proposed drawing corrections submitted on 7/9/03 have been approved by the examiner.

Claim Objections

2. Claims 16-18 are objected to because of the following informalities:

In claim 16, line 3, it appears that "a print sheet" should actually be --said print medium-- in order to use consistent terminology in the claims.

In claim 1, line 4, it appears that --in-- should appear after "performed" for proper grammar in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 5-6 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al.

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With respect to claim 1, Kimura et al. discloses a printing apparatus including a transporting means 17-19 and a vibrating means 1 as shown in Figure 5 of Kimura et al. with respect to the last paragraph of claim 1, applicant has not recited any further structure in this paragraph. Since the claim is an apparatus claim, the claim must be limited by reciting further structural limitations. Any functional recitations are not considered relevant to the patentability of the claim. See MPEP § 2114.

With respect to claim 2, Kimura et al. discloses a movable member 18 which moves and stops for feeding print medium 16. As shown in Figure 5 of Kimura et al., movable member 18 contacts print medium 16. The last four lines of claim 2 are a functional recitation as mentioned above in reference to the functional language of claim 1.

With respect to claim 5, Kimura et al. discloses that the vibrator 1 is part of the carriage 4 (Kimura et al., col. 3, lines 34-38).

With respect to claim 6, the carriage 4 reverses when it gets to the end of the stator 8.

With respect to claim 15, in col. 4, lines 13-15, Kimura et al. discloses that the printer is a bubble jet type printer.

5. Claims 1 and 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kelly.

With respect to claim 1, Kelly discloses a printing apparatus including a transporting means 14 and 18 and a vibrating means, pad 44, (Kelly, col. 7, lines 30-34) that vibrates the transporting means 14 and 18.

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With respect to claim 3, Kelly discloses that the transporting means is comprised of a pair of rollers 14 and 18 as shown in Figures 3-4 of Kelly that are biased against each other by springs 50. Kelly additionally discloses driving means 26 for driving roller 14.

With respect to claim 4, Kelly discloses that roller 14 is a transportation roller located upstream of the printing means (see Figure 8 of Kelly) and that the roller 14 is driven by motor 26. Furthermore, Kelly discloses that the roller 14 is a pinch roller.

6. Claims 1 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Tung et al.

To the extent that the claims can be understood, it appears that Tung et al. anticipates the claimed invention.

With respect to claim 1, Tung et al. discloses a transporting means 306 (Tung et al., col. 4, lines 27-34) and a vibrating means 110, 112, 108 as shown in Figure 2 of Tung et al.

With respect to claim 7, Tung et al. further discloses a pressure plate 102 that elastically supports the printing medium 12 by elastic springs 100 and a sheet feeding roller 106. The vibrating means is a pressure releasing means for pressing the pressure plate 102 downward and releasing it upward.

With respect to claim 8, since applicant has not recited any further structure in this claim, it is rejected along with its parent claim, claim 7; all the functions recited in claim 8 must be able to be carried out by the structure recited in claim 7.

7. Claims 1, 3-4 and 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchida.

With respect to claim 1, Uchida discloses a printing apparatus including a transportation means 4,5 and a vibrating means 19,20 as shown in Figure 1 of Uchida.

With respect to claim 3, Uchida discloses that the transporting means is comprised of rollers 4-5 and further discloses a roller urging means 5c for biasing the roller 5 against roller 4 as shown in Figure 1 of Uchida and a driving means (not shown) as mentioned on page 2, paragraph 30 of Uchida.

With respect to claim 4, the transporting means includes transportation roller 4 and a pinch roller 5, both of which are located upstream of a printing means.

With respect to claim 9, Uchida further discloses a pinch roller holder 5a and a holder moving means 19,20 which is also the vibrating means.

With respect to claim 10, applicant hasn't recited any further structure in this claim. Since Uchida meets all the structure recited in claim 9, it must also be able to carry out the steps recited in claim 10.

8. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Miyazaki et al.

Miyazaki et al. discloses a printing method performed by an apparatus (Figure 1 of Miyazaki et al.) including the steps transporting a printing medium (transporting means not shown) (Miyazaki, col. 5, lines 11-12), moving a carriage without printing (and thus vibrating the transporting means) (Miyazaki et al. col. 5, lines 17-18) and then printing (Miyazaki et al., col. 5, lines 18-20).

9. Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto.

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Matsumoto discloses a printing apparatus including a carriage 404, a carriage motor 407, a transportation roller 302 and a transportation roller motor 309. The carriage travels in a direction crossing a direction that the print medium P is travels as shown in Figures 1 and 3 of Matsumoto.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida as applied to claims 1, 3-4 and 9-10 above, and further in view of Merz et al.

With respect to claim 11, Uchida discloses the claimed printing apparatus except for the detection means. However, Merz et al. teaches a printing apparatus with an encoder roller 210 for feeding printing media and encoder sensor 250 for determining the angular position of roller 210. It would have been obvious to combine the teaching of Merz et al. with the printing apparatus disclosed by Uchida for the advantage of reduction of print defect due to media misregistration (Merz et al., col. 2, lines 16-19). The remainder of claim 11 beginning with “and if it is detected” is a functional recitation without the positive recitation of structure. Since this is an apparatus claim, functional recitations are not given any patentable relevance.

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With respect to claim 12, Merz et al. discloses the sensor as mentioned above, additionally, the sensor would detect the position of roller 210 while it is stopped so that the printhead 200 prints a line. The remainder of claim 12 beginning with “and if it is detected” is a functional recitation without the positive recitation of structure. Since this is an apparatus claim, functional recitations are not given any patentable relevance.

With respect to claims 13-14, the encoder sensor 250 generates pulses according to the position of the roller 210 and sends the signals to a servo motor 180 which is a counting means for counting the signals (Merz et al., col. 5, lines 6-34).

12. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al. as applied to claim 16 above, and further in view of Matsuhashi.

Miyazaki et al. discloses the claimed method except that it is not known to the examiner what type of transportation means is used in the Miyazaki et al. patent. However, Matsuhashi teaches that a printer transporting means that includes movable rollers 12 and 34 for moving and stopping the print medium T. These rollers are held in a stable stopped position when the printhead 5 scans across the print medium. The roller 34 is biased against the roller 12 by spring 36 and the roller 12 is driven by motor 18 (Matsuhashi, col. 7, lines 13-14). It would have been obvious to combine the teaching of Matsuhashi with the method disclosed by Miyazaki et al. for the advantage of the ink capturing means that captures excess ink that misses the print medium T and prevents the printer from becoming soiled with ink (Matsuhashi, col. 2, lines 29-37).

Response to Arguments

13. Applicant's arguments filed 7/9/03 have been fully considered but they are not persuasive of any error in the above rejection.

The language added to the apparatus claims is purely functional and holds no patentable weight in apparatus claims (See MPEP § 2114). In other words, applicant has added language that describes how the apparatus is to be used, but has not added any language regarding the structure of the apparatus.

Similarly, new claim 19 largely recites functional language. While there is nothing inherently wrong in reciting functional language, it holds no patentable weight in an apparatus claim.


14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (703) 308-2259. The examiner can normally be reached Tues.-Fri between 7:30 am and 6:00 pm. Faxes regarding this application can be sent to (703) 872 - 9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (703) 305-6619. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Dan Colilla
Primary Examiner
Art Unit 2854

January 2, 2004